ACMS Performance Targets

ACMS Vision Statement:

- ACMS will provide the required data <u>when it is needed</u> and <u>in a form that the user can apply</u> to accomplish the mission.

Required data consists of <u>all the engineering data necessary to completely define an item</u> for the intended purposes of specifying, designing, analyzing, manufacturing, maintaining, sustaining, testing, inspecting, and dispositioning that item <u>over its entire life span</u>.

- ACMS must:

  ◊ Operate in a diverse Army environment,

  ◊ Integrate with other MSC business processes, and

  ◊ Communicate with other MSC, government and industry information management systems.

Specific ACMS Goals:

- <u>System of Systems</u>. ACMS will be a system of systems that is scaleable and leverages the capabilities of existing government systems where feasible, cost effective, and necessary.

- <u>Visible Data Changes</u>. Any changes made to controlled engineering data or metadata that are caused or enacted by a system within ACMS will be visible to any ACMS user who is authorized to see, use, or revise the data.

- <u>COTS Based</u>. ACMS will be based on COTS products used in conjunction with existing government systems.

- <u>Core Data and Capabilities</u>. ACMS will provide a core set of standard, Army-wide data and capabilities.

Specifically, ACMS will:

  ◊ *<u>Single Access and Control Point</u>. Provide a single, common means of finding, accessing, and controlling Army enterprise-level engineering data.*

  ◊ *<u>Sharing of Data</u>. Provide for concurrent, enterprise-wide access to and sharing of engineering data in a distributed, collaborative manner (both the data and the users may be geographically dispersed).*

  ◊ *<u>MIL-STD-2549 Data</u>. Produce and read MIL-STD-2549 data packets as a means for exchanging relationship and configuration management metadata with internal and external Product Data Management (PDM), Configuration Management (CM), authoring, Contractor Integrated Technical Information Service (CITIS), and repository systems.*

ACMS Performance Targets

◊ *Secure Data. Control and secure Army engineering data, yet not inhibit authorized users (to include remote users) from locating and retrieving needed data quickly and easily.*

◊ *Manage Multiple Formats. Provide for the management of a wide variety of engineering data formats, so that contractor created data is available, usable, and no data intelligence is lost.*

◊ *Automate Engineering Data Management. Automate Army data management functions to include data capture, storage, location, retrieval, access control, and transmittal, as well as configuration management of data, quality control of data, and system administration.*

◊ *Manage Product Structures. Provide for establishing, storing, and controlling links (relationships) between elements of product structures (i.e., parts, components, and assemblies).*

◊ *Manage Data Representations. Provide for establishing, storing, and controlling the associations between product structures and the engineering data that represent (describe) the elements of product structures.*

◊ *Manage Workflow. Provide for work process definition, routing, status tracking, and performance analyses.*

- Tailorable. ACMS will be flexible and customizable in its ability to interact with other data management systems and meet the unique information needs of individual MSCs.

Specifically, ACMS will provide:

◊ *Configuring Capabilities. System administrator-level tools for configuring ACMS to support information interchange within an Army site in accordance with each site's business processes and technical data needs, so long as the core information is provided for off-site users. These tools will permit configuring the system without needing to directly write source code or recompile unaffected software modules.*

◊ *Integration Capabilities. Provide integration tools for tailoring ACMS to extend existing functionality, add new functions, provide new methods for interacting with users, and interface with other data management systems, data authoring systems, and viewing systems.*

- Standard Interfaces. ACMS will provide standard interfaces to systems belonging to various user communities (e.g., MSC, government and industry information and process management systems).

For example, this includes COTS, government standard, and command-unique workflow and technical data management systems such as the following:

◊ *Mission Applications,*

◊ *Workflow Management Systems,*

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    ◊   *Configuration Management Systems,*

    ◊   *Repository Systems,*

    ◊   *Data Authoring Systems and their Internal Data Management Features,*

    ◊   *Product Data Management (PDM) Systems, and*

    ◊   *Contractor Integrated Technical Information Service (CITIS) systems.*

- <u>Existing Infrastructures</u>. ACMS will use existing Army communications and computing infrastructures whenever feasible and cost effective.

Vision	Problems	Goals
• ACMS will provide the required data <u>when it is needed</u> and <u>in a form that the user can apply</u> to accomplish the mission. Required data consists of <u>all the engineering data necessary to completely define an item</u> for the intended purposes of specifying, designing, analyzing, manufacturing, maintaining, sustaining, testing, inspecting, and dispositioning that item <u>over its entire life span</u>.	• Reprocurement and spares acquisitions often are delayed because the Army must re-engineer or re-validate product data for the following types of reasons: ◊ Data cannot be found or may be the wrong version, ◊ Data is poor quality because it was created from paper rather than electronically, ◊ Data is missing the critical underlying design detail or "intelligence" (i.e., the data could not be retained in its native format or in a sufficiently robust neutral format), or ◊ Data lacks original supporting analyses (e.g., stress analyses and test results). • Numerous communities, which are geographically and organizationally dispersed, must have ready access to supporting engineering data when evaluating the impacts of engineering change proposals (ECPs) and when participating in integrated product development. Today, it is difficult and time consuming to access that data for the following reasons: ◊ Insufficient speed and bandwidth of connectivity to electronic source of data, ◊ Limited access to repository in which data is stored, ◊ Multiple systems are required to retrieve	• <u>Visible Data Changes</u>. Any changes made to controlled engineering data or metadata that are caused or enacted by a system within ACMS will be visible to any ACMS user who is authorized to see, use, or revise the data. • <u>Core Data and Capabilities</u>. ACMS will provide a core set of standard, Army-wide data and capabilities. Specifically, ACMS will: ◊ <u>Single Access and Control Point</u>. Provide a single, common means of accessing and controlling Army enterprise-level engineering data. ◊ <u>Sharing of Data</u>. Provide for concurrent, enterprise-wide access to and sharing of engineering data in a distributed, collaborative manner (both the data and the users may be geographically dispersed). ◊ <u>MIL-STD-2549 Data</u>. Produce and read MIL-STD-2549 data packets as a means for exchanging relationship and configuration management metadata with internal and external Product Data Management (PDM), Configuration Management (CM), authoring, Contractor Integrated Technical Information Service (CITIS), and repository systems. ◊ <u>Manage Multiple Formats</u>. Provide for the management of a wide variety of engineering data formats, so that

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	data (e.g., no single, common method of locating and retrieving data means an ECP evaluator or a member of multiple IPTs may require access to and know-how about multiple systems), ◊ Incompatible or unavailable data creation and viewing software, and ◊ Lack of simultaneous access by multiple users to engineering data, particularly for view only functions. • Army budgets and staff allotments are shrinking. Downsized organizations/personnel need to be able to generate and process (e.g., use) engineering data more efficiently.	contractor created data is available, usable, and no data intelligence is lost. ◊ Automate Engineering Data Management. Automate Army data management functions to include data capture, storage, location, retrieval, access control, and transmittal, as well as configuration management of data, quality control of data, and system administration. ◊ Manage Product Structures. Provide for establishing, storing, and controlling links (relationships) between elements of product structures (i.e., parts, components, and assemblies). ◊ Manage Data Representations. Provide for establishing, storing, and controlling the associations between product structures and the engineering data that represent (describe) the elements of product structures. ◊ Manage Workflow. Provide for work process definition, routing, status tracking, and performance analyses.
• ACMS must: ◊ Operate in a diverse Army environment,	• Army engineering data is stored in many repositories: JEDMICS, local command or program repositories, and contractor repositories. With acquisition reform, the Army will own less data and the problem will become more severe as the Army becomes more dependent on contractors for access to data they retain. The Army lacks the ability to easily locate and access data from	• System of Systems. ACMS will be a system of systems that is scaleable and leverages the capabilities of existing government systems where feasible, cost effective, and necessary. • Visible Data Changes. Any changes made to controlled engineering data or metadata that are caused or enacted by a system within ACMS will be visible to any ACMS user who

Vision	Problems	Goals
	multiple repositories for the following reasons:	is authorized to see, use, or revise the data.

Problems

multiple repositories for the following reasons:

◊ Program unique data management architectures, each with its own technologies, processes, and data formats;

◊ Cultural concerns and lack of established processes for operating in a collaborative engineering data environment; and

◊ Security concerns regarding multi-site transmission of sensitive/classified data.

• The Army is a diverse environment with many commands and organizations with different mission requirements. They have different infrastructures and processes which can be expected to persist in the near-term.

• The configuration management and storing of official engineering data is done by different systems (TD/CMS and JEDMICS respectively). Discrepancies occur as the configuration management system and the repository system get out of synchronization. This results in users retrieving the wrong data or being unable to retrieve the right data.

Goals

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• Core Data and Capabilities. ACMS will provide a core set of standard, Army-wide data and capabilities.

Specifically, ACMS will:

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